RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION, OPERABLE UNIT-1/2A
GROUNDWATER AT SITES 18 AND 24
MCAS EL TORO, CALIFORNIA

May 2002

Originator: Nicole Moutoux, RPM U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 7 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS	
1. Page 4, Declaration: Please change the EPA signature block to Ms. Deborah Jordan.	**RESPONSE 1:** The signature block has been updated as requested.
2. Page 2-5, Recent Evaluations and Assessments: Please update the schedule for the draft Radiological Release Report to reflect the Navy's most recent information.	**RESPONSE 2:** The schedule for the Radiological Release Report has been updated to state that the draft report is expected to be issued in spring 2002 and finalized in fall 2002.
3. Page 5-24, Vadose Zone Remediation: Please update the schedule given for the final report for Site 24.	**RESPONSE 3:** Page 5-24 has been updated to state that the closure report for soil at Site 24 is expected to be finalized in spring 2002.
4. Page 9-4, Table 9-2: As in the Proposed Plan, Table 9-2 should contain a footnote regarding the amount of mass removed using Alternative 8A in the first 20 years.	**RESPONSE 4:** A footnote has been added to Table 9-2 as requested. The footnote reads as follows: "Computer modeling shows that Alternative 8A is the most effective alternative during the first 20 years of operation at removing the initial mass of VOC contamination. By further optimizing placement of the extraction wells in the remedial design phase, remediation time may be significantly shortened."
5. Page 9-6, Long-Term Effectiveness and Permanence: It is mentioned that Alternatives 6A, 8, and 8A would be most effective in removing mass in the first 20 years. Please expand on this. Why are they most effective?	**RESPONSE 5:** Alternatives 6A, 8, and 8A are the most effective in removing contaminant mass because each of these alternatives use one or more extraction wells located in the area of highest TCE concentration in the principal aquifer. An explanantion of this has been added to Page 9-6.
6. Page 10-1, Groundwater Remediation: In this section, the Navy states that the exact number and locations of wells for Alternative 10B' will be discussed during the remedial design phase. This statement is not made with regard to Alternative 8A. However, it is stated in the Proposed Plan for Sites 18 and 24 that by "further optimizing the well placement of the extraction wells in the remedial design phase, remediation time may be significantly shortened". This statement refers to Alternative 8A. We feel that, just as with Alternative 10B', discussions regarding placement and number of wells for Alternative 8A should take place during remedial design. A	**RESPONSE 6:** DON agrees and has added the following sentence to the first paragraph in Section 10.1: "The exact number and location of the wells will be established by OCWD/IRWD and regulatory agencies during the remedial design phase."

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statement to this effect should be added to the ROD.	
7. Page 10-5, Figure 10-2: The colors used to show plume concentrations are very difficult to read. Please revise the map to use more contrasting colors.	**RESPONSE 7:** The colors used in Figure 10-2 have been revised to be more intense and more contrasting.

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MCAS EL TORO, CALIFORNIA

May 2002

Originator: Triss M. Chesney, P.E., RPM DTSC **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 8 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS	***RESPONSES TO SPECIFIC COMMENTS***
1. Declaration, Description of the Remedy, page 2: At the end of this page, the components for the selected groundwater remedy are listed. Please include a bullet for institutional controls.	**RESPONSE 1:** A bullet for institutional controls has been added as requested. The bullet reads as follows: • Institutional controls to prevent use of contaminated groundwater, protect equipment, and allow access to DON, OCWD/IRWD, and regulatory personnel. The institutional controls are explained further in the second paragraph on page 3.
2. Section 2.1, Initial Investigations, Page 2-2: The last sentence in this section states, "On 13 April 1993, RWQCB rescinded the cleanup and abatement order, so in September 1993, the pump and treatment system was shut down (JEG 1996a)." **Please provide additional detail regarding the reasons that the RWQCB rescinded the cleanup and abatement order before groundwater cleanup was completed.**	**RESPONSE 2:** The following explanation has been added to the end of the last paragraph in Section 2.1: "On 13 April 1993, RWQCB rescinded the CAO because the required actions were complete and because the DON had entered into an FFA to investigate and remediate environmental impacts associated with past and present activities at MCAS El Toro. In September 1993, the pump and treatment system was shut down (JEG 1996a)." Table 2-1 has also been revised to add this information.
3. Section 2.5, Recent Evaluations and Assessments, Pages 2-4 and 2-5: The second sentence in the second paragraph states, "The evaluation of perchlorate showed that the reported concentrations of perchlorate exceeded the California provisional action level (PAL) at Sites 1, 18, and 19 and the federal PAL at Site 1." **Please clarify that the California PAL referenced was 18 micrograms per liter (µg/L) that was established in 1997. Additionally, as of January 2002, the current California PAL for perchlorate is 4 µg/L.**	**RESPONSE 3:** The referenced sentence was revised to read: "The evaluation of perchlorate showed that the reported concentrations of perchlorate exceeded the California provisional action level (PAL) of 18 micrograms per liter (µg/L) at Sites 1, 18, and 19 and the federal PAL of 32 µg/L at Site 1." The following parenthetical note was also added following the sentence: (The California provisional PAL of 18 µg/L was established in 1997. As of January 2002, the current California PAL for perchlorate is 4 µg/L.)
4. Section 4, Scope and Role of Operable Unit, Page 4-1: The fourth sentence in the fifth paragraph states, "Remediation of groundwater at Site 2 will be addressed in the final ROD."	**RESPONSE 4:** This issue was addressed by adding the following fifth sentence to the paragraph in question: "A radiological survey was conducted at Sites 2 and 17 in August through October, 2001. The final ROD will also

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Date:	**8 March 2002**	
	at Site 2 will be addressed in the final ROD." **Please clarify that the final ROD will also address radiological contamination, if any, at both Sites 2 and 17.**	summarize the results of the survey and address radiological contamination, if any, at both Sites 2 and 17."
5.	**Section 5.2.3, Site Investigations: This section describes the investigations conducted for Site 24. Please include the applicable results and findings of the radionuclide evaluation presented in Section 2.5, Recent Evaluations and Assessments. Additionally, include justification for not considering these constituents as chemicals of concern.**	**RESPONSE 5:** A new section, Section 5.3.12, titled Radionuclide Evaluation has been added to the ROD. The section presents the findings of the radiological evaluation and provides the justification for why radionuclides are not considered chemicals of concern at MCAS El Toro. In addition, Section 5 has been reorganized to combine the discussions of Site 18 and 24 where appropriate and to emphasize that the Phase I investigation of Site 18 included groundwater at the entire Station, including the area that is now known as Site 24. This is important because the Phase I investigation evaluated all chemicals present in groundwater at MCAS El Toro, including VOCs, SVOCs, pesticides, herbicides, radionuclides, and metals and concluded that VOCs were the only chemicals of concern at Sites 18 and 24.
6.	**Figure 5-6, TCE [trichloroethylene] Concentrations in the Shallow Groundwater Unit, June 2000: Please show the streets in the areas to provide a reference for the plume location.**	**RESPONSE 6:** As requested, streets have been added to Figure 5-6 for reference purposes.
7.	**Section 5.3.3, Site Investigations: This section describes the investigations conducted for Site 18. Please include the applicable results and findings of the perchlorate and radionuclide evaluations presented in Section 2.5, Recent Evaluations and Assessments. Additionally, include justification for not considering these constituents as chemicals of concern.**	**RESPONSE 7:** Two new sections, 5.3.10 and 5.3.12, have been added to address the perchlorate and radionuclide evaluations and to justify why these constituents are not considered chemicals of concern.
8.	**Section 5.2.3.8, Groundwater Monitoring: This section summarizes results for the shallow groundwater unit (Site 24) from routine groundwater monitoring. A summary is provided for only VOC groups. Please include a discussion of all of the constituents detected during groundwater monitoring.**	**RESPONSE 8:** A discussion of all constituents detected during the latest round of groundwater monitoring has been added to Section 5.3.11 of the ROD. In addition, a new section, Section 2.6, Groundwater Monitoring, has been added to the ROD. Section 2.6 provides a summary of all chemicals reported in groundwater, including VOCs, SVOCs, pesticides/PCBs, herbicides, radionuclides, and metals and explains how all chemicals except

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	VOCs were eliminated as chemicals of concern at Sites 18 and 24.
9. Figure 5-8, Figure 5-9, and Figure 5-10: Please show the streets in the areas to provide a reference for the plume location.	**RESPONSE 9:** As requested, streets have been added to the appropriate figures in Section 5 to provide a reference for the plume location.
10. Figure 5-11, Total Dissolved Solids Concentrations in Principal Aquifer, 1992 to 1994: It appears that two sets of isoconcentration contours are shown. Please revise the figure so that the title, legend, and contours shown are consistent.	**RESPONSE 10:** Figure 5-11 has been revised as requested.
11. Section 5.3.3.4, Groundwater Monitoring, Page 5-39: This section summarizes the groundwater analytical results from August 1999. Please explain the use of August 1999 data when more recent data is available. Additionally, a summary is provided for only VOC groups. Please include a discussion of all of the constituents detected during groundwater monitoring.	**RESPONSE 11:** The draft final ROD has been revised to include the results of Round 14, the latest round of groundwater monitoring at MCAS El Toro. During this round, groundwater was analyzed for VOCs and general chemistry. As discussed in the response to Comment 8, a discussion of why SVOCs, pesticides/PCBs, herbicides, radionuclides, and metals were eliminated as chemicals of concern has been added to the ROD as Section 2.6.
12. Section 6.3, Groundwater Uses and Figure 6-1, Active Irrigation Water Wells in the Vicinity of Former MCAS El Toro: A number of active irrigation water wells are referenced in Section 6.3. Verify that the designation in the text is consistent with the designation on Figure 6-1 and verify that the wells mentioned in the text are shown on the figure. Additionally, show the streets in the areas to provide a reference for the well and plume locations and indicate the concentration of the plume.	**RESPONSE 12:** The text has been verified to be consistent with the designation on Figure 6-1 and streets have been added to the figure as a reference for the well and plume locations. In addition, the concentration of the plume has been added to Figure 6-1.
13. Section 6.3, Groundwater Uses: The first paragraph states, " . . . On-Station irrigation well 18-TIC55, at the western end of the east-west runway, is connected to the regional irrigation distribution system." **Please clarify whether this well is screened in the principal aquifer or shallow groundwater unit and if water is being extracted from a contaminated plume.**	**RESPONSE 13:** The following clarification was added to the first paragraph in Section 6.3: "Well 18_TIC055 is screened in the principal aquifer upgradient of the principal aquifer VOC plume and, because of its upgradient location, does not extract groundwater from the principal aquifer VOC plume."

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14. Table 8-1, Cleanup Standards for Contaminants of Concern in Groundwater (reported in micrograms per liter), Page 8-2: This table summarizes the cleanup standards for contaminants in groundwater. The table should also include all of the COPCs identified for Site 24 in Table 7-3.	**RESPONSE 14:** The chemicals on Table 8-1 represent the chemicals of concern for Sites 18 and 24. These chemicals drive the need for remedial action at these sites. The other chemicals on Table 7-3 were reported at the sites, but either were present at levels that did not represent a risk to human health (as evaluated during the Phase I RI) or were present at levels representative of background in the area. Since the remaining COPCs (that are not shown on Table 8-1) are not chemicals of concern, there is no need to establish cleanup levels for them.
15. Section 8.1.2.3, Institutional Controls. Page 8-11: This section states that the DON is working with various agencies to implement institutional controls for the off-Station portion of the groundwater plume. Please provide additional detail regarding the intended means of ensuring that institutional controls will be implemented. Information should include the agencies that will be involved, the responsibilities of each agency, the permits that are issued by each agency, the manner in which institutional controls will be incorporated into the permit process, and the mechanism for notifying and updating the agencies. **Please clarify that institutional controls to protect the remedy and provide for future access to the sites will also be implemented.**	**RESPONSE 15:** Section 8.1.2.3 has been revised to include additional information about off-Station institutional controls. The new section was submitted to DTSC for review prior to issuance of the Draft Final ROD.
16. Section 8.2.2.2, Institutional Controls, page 8-22: The second sentence in the first paragraph states, "The DON anticipates the primary legal mechanism used to implement institutional control measures at Site 24 would be either lease conditions (if the property is leased) or restrictive covenants (if the property is transferred by deed)." **Please clarify that the restrictive covenants are the Environmental Restriction Covenant and Agreement entered into under California Health and Safety Code sections 25202.5 and 25222.1 and California Civil Code section 1471. Further the Agreement is separate and**	**RESPONSE 16:** Section 8.2.2.2 has been re-written to clarify the relationship between restrictive covenants in the deed and the Environmental Restriction Covenant and Agreement.

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	supplements any restrictive covenants in the deed.	
17.	**Section 8.2.2.2, Institutional Controls, Land-Use Restrictions, page 8-22: The last sentence on this page states, "Therefore, the following land-use restrictions would be required at Site 24."** **Please clarify that these restrictions will remain in place until remediation is complete and federal and state cleanup levels have been met.**	**RESPONSE 17:** Section 8.2.2.2 has been rewritten and the clarification has been added as requested.
18.	**Section 8.2.2.3, Implementation of Institutional Controls, Page 8-24: The second sentence in the first paragraph states, "Land-use control restrictions would be included in an Environmental Covenant Restriction and Agreement between the DON and DTSC." The term "Environmental Covenant and Restriction Agreement" should be "Environmental Restriction Covenant and Agreement."**	**RESPONSE 18:** Section 8.2.2.3 has been rewritten and the references to the Environmental Covenant and Restriction Agreement have been corrected.
19.	**Section 8.2.2.3, Implementation of Institutional Controls, Environmental Restriction Covenant and Agreement, page 8-24: This section references the memorandum of agreement (MOA) regarding the Environmental Restriction Covenant and Agreement that was executed between DON and DTSC on May 16, 2000. This MOA, which formalizes the use of a model agreement and describes specific conditions for which agreements would be used for DTSC enforcement, should be included as an attachment to the ROD.**	**RESPONSE 19:** As requested, a copy of the MOA has been added to the ROD as Attachment D.
20.	**Section 8.2.2.3, Implementation of Institutional Controls, Environmental Restriction Covenant and Agreement, page 8-24: This section should include a description of the objectives of institutional controls and the specific restrictions (reference Section 8.2.2.2) to be included in the land use covenant that will prevent exposure to contaminated groundwater, protect the remedy, and provide future access to the Sites. This detail is necessary to determine if the remedy will be sufficiently protective of human**	**RESPONSE 20:** Sections 8.2.2.2 and 8.2.2.3 have been rewritten. The objectives of the institutional controls and the specific restrictions now appear in Section 8.2.2.2. Land-use control objectives to be achieved through the land-use restrictions include: • Preventing the use of VOC-contaminated groundwater until cleanup objectives have been achieved.

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health and the environment. **Additionally, for prevention of exposure to contaminated groundwater, the draft ROD generally describes the objectives of the institutional controls to prevent exposure of current and future on-Station agricultural workers to COCs in groundwater through dermal absorption and inhalation of VOCs (page 5-41), prevent exposure to groundwater at Site 24 (page 8-22), to prevent exposure to contamination in groundwater until remedial goals are met (page 9-11), prevent domestic use of groundwater containing VOCs at concentrations above cleanup levels (page 8-1). These objectives should be consolidated and it should be stated that they will be met by implementing the restrictions presented in Section 8.2.2.2.**	• Protecting the groundwater extraction, injection, and monitoring wells and associated piping and equipment. Page 5-41 has been revised to eliminate the reference to potential exposure of the on-Station agricultural worker. The agricultural wells that are present on- and off-Station at MCAS El Toro are screened in the principal aquifer. Since groundwater contamination is present in the shallow groundwater unit on-Station, exposure of an on-Station agricultural worker is not considered plausible. The last four sentences of the first paragraph on page 5-41 now read as follows: "One on-Station well and eight off-Station active agricultural wells are found in the vicinity of Former MCAS El Toro. The wells are screened in the principal aquifer. The on-Station well does not extract VOC-contaminated groundwater because VOC contamination is not present in the principal aquifer on-Station. Current and future off-Station agricultural workers could be exposed to COCs in groundwater through dermal adsorption and inhalation of VOCs. It is not considered plausible that on-Station agricultural workers could be exposed to VOCs in groundwater because agricultural wells are not screened in the shallow groundwater unit where the VOC contamination is present on-Station. It is also not likely that irrigation wells would be screened in the shallow groundwater unit in the future because of the lower yield and higher TDS concentrations present at in the shallow groundwater unit." The references on pages 8-1, 8-22, and 9-11 have been reviewed for consistency with the first bullet above and revised as necessary.
21. Section 8.2.2.3, Implementation of Institutional Controls, Environmental Restrictive Covenants, Page 8-25: This section refers to restrictive covenants executed by the transferee. These are the	**RESPONSE 21:** Section 8.2.2.3 has been revised to include the clarifications provided by DTSC.

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covenants in the deed (between the Navy and the transferee) and not the separate Environmental Restriction Covenant and Agreement that will be executed between DTSC and the DON pursuant to the California Health and Safety Code and California Civil Code. Please revise the text to clarify that the restrictive covenants in the deed and the Environmental Restriction Covenant and Agreement are two separate covenants. **DTSC enforces the Environmental Restriction Covenant and Agreement under the California Health and Safety Code. The Agreement will be executed contemporaneously with the execution of the deed and will be recorded with the County. Further, all of the specific restrictions from Section 8.2.2.2 must be included in the Agreement.**	
22. Section 8.2.2.3, Implementation of Institutional Controls, Environmental Restrictive Covenants (Cal. Civ. Code § 1471), Page 8-25: The last paragraph is this section states, " . . . The scope of DTSC's review of the deed would be to evaluate whether the use restrictions set forth in Section 8.2.2.2 of this ROD have been incorporated into the deed language in accordance with the DON"s commitments in the ROD." **Please revise the text to reflect that DTSC will review the deed to ensure that the use restrictions set forth in the Environmental Restriction Covenant and Agreement, and those set forth in Section 8.2.2.2, have been incorporated into the deed language.**	**RESPONSE 22:** Section 8.2.2.3 has been revised and DTSC's comment has been incorporated into the revised section of the ROD.
23. Section 10, Selected Remedy, Page 10-1: For clarity, a summary (in the form of a list) of the components of the selected remedy for both Sites 18 and 24 should be provided before Section 10.1. In turn, this list should correspond to the list provided in the Executive Summary.	**RESPONSE 23:** A bulletized list of components of the selected remedy has been added before 10-1. This list is identical to the list provided on Page 2 of the Executive Summary.
24. Section 10, Selected Remedy: The selected remedy should include a	**RESPONSE 24:** A discussion of implementation, maintenance, and

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	description of how institutional controls will be implemented maintained, and enforced.	enforcement of institutional controls has been added to Section 10.8.
25.	**Section 10.3, Non-CERCLA Components of the IDP, page 10-2: The last sentence in the first paragraph states, "Groundwater in the vicinity of the Station contains inorganic compounds, including TDS [total dissolved solids], sulfate, nitrate, and chloride . . . " Please clarify the source of these compounds.**	**RESPONSE 25:** The source of these compounds is discussed in the second paragraph in Section 10.3.
26.	**Section 10.4, Settlement Agreement, page 10-8: The second paragraph states that permanent termination of the operation of the nonpotable portion of the IDP will not occur without the concurrence of the listed regulatory agencies. DTSC should be added to this list.**	**RESPONSE 26:** DTSC has been added to the list of regulatory agencies that must concur before permanent termination of the nonpotable portion of the IDP may occur.
27.	**Section 10.8, Institutional Controls, page 10-11: The last sentence in the first paragraph states, "Institutional controls to prevent inadvertent use of groundwater will be implemented as discussed in Sections 8.1.2.3 and 8.2.2.3."** **Please clarify that institutional controls to protect the remedy and provide for future access to the sites will also be implemented.**	**RESPONSE 27:** Section 10.8 has been expanded to address how institutional controls will be implemented on- and off-Station. The first paragraph now reads: "Institutional controls for the on-station portion of the groundwater plume are intended to protect residents from use of VOC-contaminated groundwater until cleanup goals are achieved in the shallow groundwater unit; protect the groundwater extraction, injection, and groundwater monitoring wells and associated piping and equipment; and assure access to the site by the DON and regulatory agencies to assure that construction, operation and maintenance, and monitoring of the final remedy and any further investigation and response action are implemented."
28.	**Section 11.2.1, Chemical Specific ARARs [Applicable or Relevant and Appropriate Requirements], page 11-12: The last paragraph on the page states, "The DON has determined that the substantive provisions of Cal. Code Regs. tit. 22, § 66264.94(a)(1), (a)(3), (c), (d), and (e) constitute relevant and appropriate federal ARARs for groundwater at Sites 18 and 24."** **DTSC reiterates its position that the substantive provisions of**	**RESPONSE 28:** Thank you for the clarification of DTSC's position on this issue. A statement of the DON and DTSC's respective positions regarding Cal. Code Regs. tit. 22 § 66294(a)(1), (a)(3), (c), (d), and (e) is found in the last paragraph on page 11-12. A statement of the DON and DTSC's respective positions on the imposition of environmental land use restrictions under California Civil Code section 1471 and California Health and Safety Code sections 25202.5 and 25222.1 has been added to Section 11.2.3.2 as follows:

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California Code of Regulations, title 22, section 66264.94(a)(1), (a)(3), (c), (d), and (e) and the imposition of environmental land use restrictions under California Civil Code section 1471 and California Health and Safety Code sections 25202.1 [sic] and 25222.1 are State ARARs.	DON agrees that substantive provisions of California Civil Code section 1471 and California Health and Safety Code sections 25202.5 and 25222.1 are State ARARs as discussed on page 11-18 of the ROD.
29. **Section 11.2.3.2, State, California Civil Code Section 1471 and California Health and Safety Code Section 25202.5, 25222.1, and 25238(c), page 11-18: This section states that the substantive provisions of California Civil Code section 1471 and California Health and Safety Code section 25222.1 are ARARs for entering into an Environmental Restriction Covenant and Agreement that would be recorded. It is also stated that the DON will comply with the substantive requirements of California Health and Safety Code section 25222.1 by incorporating Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) use restrictions into the DON's deed of conveyance in the form of restrictive covenants under the authority of California Civil Code section 1471. The land use restrictions and other provisions as described in the comments above should be included in both the Agreement and the deed.**	**RESPONSE 29:** The fourth sentence in the fourth paragraph on Page 11-18 has been revised to incorporate DTSC's suggestion and now reads as follows: The DON will comply with the substantive requirements of Cal. Health and Safety Code § 2522.1 by incorporating the CERCLA use restrictions described in Section 8.2.2.2 into the DON's deed of conveyance in the form of restrictive covenants under the authority of Cal. Civ. Code 1471 and into the Environmental Restriction Covenant and Agreement.

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Originator: Patricia A. Hannon RWQCB **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 5 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS	
1. Page 1-3 Figure 1-2 IRP Sites 18 and 24: In the legend, remove the "B" from label. Some areas are above 800 µg/LB.	**RESPONSE 1:** The "B" has been removed from the label as requested.
2. Page 5-2, fourth paragraph: According to the Water Quality Control Plan for the Santa Ana River Basin (1995), MCAS El Toro is located over the Irvine Forebay I Groundwater Subbasin.	**RESPONSE 2:** The fourth paragraph on page 5-2 and Figure 5-1 have been revised to indicate that MCAS El Toro is located over the Irvine Forebay I Groundwater Subbasin.
3. Page 5-18, Carbon Tetrachloride Group: The State maximum contaminant level (MCL) for carbon tetrachloride is 0.5 µg/L, which is more stringent than the Federal MCL of 5µg/L. Please revise this section.	**RESPONSE 3:** The discussion on Page 5-18 has been revised to reflect the current California MCL for carbon tetrachloride (0.5 µg/L).
4. Page 5-25, Table 5-3 Vadose Zone Cleanup Goals: Same comment as for page 5-18. Please revise the table.	**RESPONSE 4:** Table 5-3 has also been revised to reflect the current California MCL for carbon tetrachloride.
5. Page 5-37, Figure 5-11, Total Dissolved Solids Concentration in Principal Aquifer, 1992 to 1994: This figure is confusing. The isoconcentration contours cross in several places. Please revise.	**RESPONSE 5:** Figure 5-11 has been revised to correctly show the isoconcentration contours for total dissolved solids concentrations.
6. Page 9-13, Table 9-5 Plume Length and Area in the Shallow Groundwater Unit: Please add information to the title of this table to better explain what it represents.	**RESPONSE 6:** The title of Table 9-5 has been changed to "Length and Area of TCE Plume Exceeding MCL in Shallow Groundwater Unit."
7. Page 10-5 Figure 10-2 Alternative 10B': Shallow Groundwater Unit Well Configuration: There are several items in the legend for this figure that are not on the map. Please revise the legend.	**RESPONSE 7:** Figure 10-5 has been revised to delete references to items that are not present on the figure.

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MCAS EL TORO, CALIFORNIA

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Originator: Roy Herndon, District Hydrogeologist OCWD **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 12 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS	
1. Page 5-18, subsection titled "Carbon Tetrachloride Group": Modify second sentence to reflect the California MCL of 0.5 ug/L for carbon tetrachloride, rather than the federal MCL. The lower state MCL is a designated ARAR.	**RESPONSE 1:** The second sentence has been modified as requested to reflect the current California MCL of 0.5 µg/L for carbon tetrachloride.
2. Page 5-4, subsection titled "Principal Aquifer": Modify second sentence as follows: "This is the main aquifer for irrigation groundwater supply to IRWD and the Irvine Company northwest of the Station."	**RESPONSE 2:** The sentence has been revised as requested.
3. Page 5-25 (Table 5-3): The table should include the California MCL of 0.5 ug/L for carbon tetrachloride, in addition to, or instead of, the federal MCL.	**RESPONSE 3:** Table 5-3 has been revised to show 0.5 µg/L as the cleanup goal for carbon tetrachloride based on the current California MCL.
4. Page 5-37 (Figure 5-11): The figure appears to show TDS concentration contours from two different sources, as they overlap with each other. Only one set of contours should be shown.	**RESPONSE 4:** Figure 5-11 has been revised to indicate what each set of contours represents in the legend.
5. Page 6-5, bullet statements: Modify as follows: "extract and treat groundwater to develop a drinking-water supply from the principal aquifer outside the VOC plume at the following well locations . . . accept and treat for VOC removal the groundwater the Marine Corps/DON must remediate and use in IRWD's reclaimed water system."	**RESPONSE 5:** The first bullet on page 6-5 has been modified to incorporate IRWD's comment and now reads as follows: • extract and treat groundwater to develop a drinking-water supply from the principal aquifer outside the VOC plume at the following well locations (IRWD 110 [formerly TIC 110], 75, 76, and 77); intercept, contain, and treat groundwater with high concentrations of TDS and nitrates; and The second bullet has been modified per IRWD's suggestion with the exception that the term non-potable has been substituted for "reclaimed water" to be consistent with the terminology used in the Settlement Agreement. The second bullet now reads as follows: • accept and treat for VOC removal the groundwater that the Marine

Originator: Roy Herndon, District Hydrogeologist OCWD **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 12 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
	Corps/DON must remediate and use in IRWD's non-potable system.
6. Page 8-4, third bullet: Change "OCWD/IRWP" to "OCWD/IRWD."	**RESPONSE 6:** The spelling has been corrected as suggested.
7. Page 8-4, second paragraph: Modify as follows: "As a result of these meetings, OCWD/IRWD developed a new . . ."	**RESPONSE 7:** The sentence has been revised as requested.
8. Pages 8-7 (Figure 8-1), 8-21, and 10-5 (Figure 10-2): The SGU extraction well locations for recommended Alternative 10B', as conceptually shown, do not encompass the downgradient area of high VOC concentrations. It is clear from Figures 5-7 and 5-8 that VOCs exceeding 100 ug/L (see well 18_MCAS03-2 at 140 ug/L) are flowing within the SGU beyond the station boundary toward the area of hydraulic continuity with the underlying Principal aquifer. As one of the stated remedial action objectives for Site 24 groundwater is to "prevent VOCs at concentrations above cleanup levels from migrating beyond the shallow groundwater unit" (see page 8-1), the VOC data demonstrate the need for extraction wells located near and/or downgradient of the station boundary in order to prevent VOCs from migrating into the Principal aquifer. We understand that the specific locations of the extraction wells will be evaluated and determined during the remedial design phase of the work, but we believe the conceptual locations shown in the draft ROD do not adequately characterize the locations that may be necessary to meet the stated objectives.	**RESPONSE 8:** The conceptual locations of the wells in the shallow groundwater unit are based on modeling performed during the Site 24 FS. This modeling was performed using the best information available at the time about the location and concentrations of VOCs in the plume. Because all the information that is presented in the tables in Section 9 and used to compare alternatives (e.g., plume area, time to remediate the aquifer, amount of TCE removed) is based on the modeling results, it is not possible to change the well locations without rerunning the model and revising all the comparative information. The DON will refine the model and use it to optimize the locations of the extraction wells during the remedial design phase once the ROD has been finalized.
9. Page 8-17, Section 8.1.7, first paragraph: Modify first sentence as follows: "Alternative 8A is a relatively new alternative developed by OCWD/IRWD in 1999 after . . ."	**RESPONSE 9:** The sentence has been revised as requested.
10. Page 8-27 (Figure 8-5): The proposed locations of new monitoring wells should be modified or augmented as necessary to adequately monitor the performance of the SGU extraction wells in preventing movement of the VOCs from the SGU to the Principal aquifer off	**RESPONSE 10:** The conceptual locations of the monitoring wells, like the extraction wells, is also based on modeling performed during the Site 24 FS. Until the model is rerun during the remedial design phase, there is no quantitative basis for changing the locations of the monitoring or the extraction

Originator: Roy Herndon, District Hydrogeologist OCWD **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 12 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
station. Figure 8-5, as shown, shows the conceptual SGU monitoring well network as inadequately covering the downgradient extent of the elevated VOC concentrations (e.g., < 50 ug/L) in the SGU. This figure should be modified to conform to the stated remedial action objectives and SGU plume extent, as discussed in Comment No. 8 above.	wells.
11. Page 9-4 (Table 9-2): Include footnote "c" referring to the 95-year cleanup time for Alternative 8A. Footnote "c" should be the same as that shown in Table 3 of the OU-1/2A Proposed Plan, which states, "Computer modeling shows that Alternative 8A is the most effective alternative during the first 20 years of operation at removing the initial mass of VOC contamination. By further optimizing the well placement of the extraction wells in the remedial design phase, remediation time may be significantly shortened."	**RESPONSE 11:** Footnote "c" has been added to Table 9-2 as requested.
12. Page 10-1, Section 10.1: Modify first paragraph, beginning with the second sentence, as follows: "Groundwater is extracted from wells ET-1 and ET-2 and conveyed to the IDP treatment plant where it is treated to remove VOCs (CERCLA treatment) and reduce dissolved solids (non-CERCLA treatment). The treated groundwater is then distributed for nonpotable uses. Initial extractions from Well 78 will be conveyed to IRWD's nonpotable water system. If VOCs exceed the MCL in this well, extracted water will be conveyed to the IDP treatment plant for VOC removal."	**RESPONSE 12:** The first paragraph in Section 10.1 has been revised as requested.
13. Page 10-2, last bullet in Section 10.2 should read: "DON's pumping and pipeline conveyance from those extraction wells to the IDP nonpotable pipeline feedwater conveyance system's point of connection at the Former MCAS El Toro boundary."	**RESPONSE 13:** The sentence has been revised as requested.
14. Page 10-8, second paragraph: Modify second sentence as follows: "This water will be conveyed to the IDP treatment plant via a separate conveyance line for treatment to remove dissolved solids and	**RESPONSE 14:** The sentence has been revised as requested.

Originator: Roy Herndon, District Hydrogeologist OCWD **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 12 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
nitrates."	
15. Page 10-8, Section 10.4, first paragraph: Modify second sentence as follows: "The DON, DOJ, OCWD, and IRWD have reached . . ."	**RESPONSE 15:** The sentence has been revised as requested.

Originator: Thelma Estrada, Legal Counsel U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 19 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS **1. P. 5-26: Third to the last paragraph – Last sentence here makes reference to 10 µg/L. Please provide an explanation of the significance of this number.**	**RESPONSE 1:** The number 10 µg/L was included in the report to provide the reader with an idea of the magnitude of the maximum concentrations of chemicals of concern reported in deep soil gas. It is not essential to the discussion since the actual numbers are provided in the text. The sentence has therefore been deleted.
2. P. 5-27: Last paragraph in Section 5.2.3.6 – Last sentence states that site-wide implementation of air sparging would be problematic because of the heterogeneities in the aquifer. There should be a follow-up sentence here that draws out the implication of this. Something like "Therefore, DON determined that..."	**RESPONSE 2:** The following sentence has been added to the last paragraph in Section 5.3.8: "The results of the pilot test allowed the DON to eliminate air sparging as a potential remedial technology for groundwater at Site 24."
3. P. 10-2: First bullet at the top of the page – There is a reference to a "Central Treatment Plan." Shouldn't it be plant?	**RESPONSE 3:** Yes. This is a typographical error. The reference was changed to Central Treatment Plant.
4. P. 10-9: Top of the page – There is a reference here to 40 CFR 300.430(f)(l)(ii)(C)(3). Please put in brackets what this requirement is.	**RESPONSE 4:** The following parenthetical note has been added following the sentence containing the reference to 40 CFR 300.430(f)(1)(ii)(C)(3): "(40 C.F.R. § 430(f)(1)(ii)(C)(3) provides that an alternative that does not meet an ARAR under federal environmental or state facility siting laws may be selected when compliance with the requirement is technically impracticable from an engineering perspective.)"
5. P. 10-10: First paragraph under Section 10.6 – Last sentence states one option being considered is injection into the principal aquifer. What are the requirements that must be complied with if this option for reinjection is implemented?	**RESPONSE 5:** A discussion of the requirements for reinjection has been added to the third paragraph of Section 11.2.1.5. This paragraph now reads: "The DON has also determined that SWRCB Res. 68-16 is not a chemical-specific ARAR for determining remedial action goals, but it is an action-specific ARAR for regulating discharged treated groundwater back into the aquifer should OCWD/IRWD elect to inject treated groundwater into the principal aquifer via well IDP-1. OCWD/IRWD would comply with Res. 68-16 by injecting the treated groundwater into areas of the aquifer where TDS and nitrate levels are not markedly different."
6. P. 11-3: First row – Under comments, include a statement that Sites	**RESPONSE 6:** In the first row, the statement regarding TSD facilities has

Originator: Thelma Estrada, Legal Counsel U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 19 March 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
18 and 24 are not TSD facilities. Second row – Under comments, delete reference to "RCRA" or "RCRA hazardous waste" since this is only addressing non-RCRA hazardous waste.	been added to page 11-3 under "comments" as requested. In the second row, references to RCRA and RCRA hazardous waste have been deleted as requested.
7. **P. 11-4: Second row – Under comments, there is a reference to "waste discharge requirements." WDRs apply to discharges to surface water. Since there is no discharge to surface water in this remedial action, please delete this reference.**	**RESPONSE 7:** The reference to WDRs has been deleted as requested.
8. **P. 11-5: First row – Under comments, please describe in parenthesis what "Chapters 2 through 4" are. Are these implementation plans?**	**RESPONSE 8:** Chapters 2, 3, and 4 are titled Plans and Policies, Beneficial Uses, and Water Quality Objectives, respectively. These descriptions have been added to page 11-5 as requested.
9. **P. 11-6: First bullet in Section 11.2.1 – see comment above regarding waste discharge limitation. Third bullet refers to secondary MCLs. Are there secondary MCLs that are being used here as cleanup levels? If not, please delete reference to secondary MCLs.**	**RESPONSE 9:** The reference to waste discharge limitation has been removed from the first bullet. The reference to secondary MCLs has been removed from the second bullet.
10. **P. 11-13: Section 11.2.1.2 – This explains how MCLs are applied at CERCLA remedies, i.e., they must be attained throughout the contaminated plume or at and beyond the edge of the waste management area when the waste is left in place. Which one is being applied here?**	**RESPONSE 10:** Section 11.2.1.2 has been revised to clarify that, in this case, MCLs are cleanup goals throughout the VOC plume.
11. **P. 11.5: Under Section 11.4, which is Utilization of Permanent Solutions, the last sentence in the first paragraph states that during implementation workers will use protective equipment etc. Does this statement above risk to workers not go under the "Short term Effectiveness" criteria rather than "Utilization of Permanent Solutions?"**	**RESPONSE 11:** This comment is correct. The statement describing the protection of workers during implementation of the remedy is associated with "Short Term Effectiveness." However, because Short Term Effectiveness is addressed in Section 9 and there is no subsection in Section 11 that deals explicitly with Short Term Effectiveness, the statement has been deleted.

Originator: Judy Tracy, Legal Counsel DTSC **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 19 March 2002 (via fax)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS **The following was submitted as possible alternative language for the draft ROD:** **1. Section 10.3, Non-CERCLA Components of the IDP, first and second paragraphs:** **The DON is obligated under CERLCA and the NCP to remediate releases of hazardous substances ~~released as a result of activities~~ at former MCAS El Toro. Groundwater in the vicinity of the Station contains inorganic compounds ... (RWQCB 1995). ~~However, these elevated concentrations are not the result of Marine Corps activities.~~** **Former MCAS El Toro is located in ~~occupies~~ an area where the historical predominant land uses have been....**	**RESPONSE 1:** Section 10.3 was revised as suggested.
2. Section 10.3, Non-CERCLA Components of the IDP, fourth paragraph: **Because ~~the~~ elevated concentrations of TDS and nitrate result from naturally occurring subsurface conditions and past and current land uses not associated with the Former MCAS El Toro, the remedial objectives do not include cleanup goals for TDS and nitrates. Cleanup of these substances at the IDP is considered outside of the scope of the CERCLA action for Sites 18 and 24 and is addressed by the Settlement Agreement described in Section 10.4.**	**RESPONSE 2:** The first sentence was revised as suggested. The second sentence was modified slightly to read as follows: "Cleanup of these substances at the IDP is considered outside of the scope of the CERCLA action for Sites 18 and 24 and is being separately addressed by OCWD/IRWD."
3. Section 11.2.1.4, Primary and Secondary MCLs: **Primary and secondary state MCLs are set forth... MCLs for inorganics are not ARARs for Site 18 and 24 because there is ~~no~~ evidence that exceedances for these chemicals ~~are caused by site-related activities~~ result from naturally occurring subsurface conditions and past and current land uses not associated with the**	**RESPONSE 3:** The suggested sentence was modified slightly to read as follows: "Primary and secondary state MCLs are set forth... MCLs for inorganics are not ARARs for Site 18 and 24 because there is evidence that exceedances for these chemicals result from naturally occurring subsurface conditions and past and current land uses not associated with the Former MCAS El Toro and the

Originator: **Judy Tracy, Legal Counsel** **DTSC** **To:** **Dean Gould, BRAC Environmental Coordinator** **MCAS El Toro** **Date:** **19 March 2002 (via fax)**	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
Former MCAS El Toro and the exceedances will be addressed under the Settlement Agreement described in Section 10.4 .	exceedances are being addressed separately by OCWD/IRWD."

RESPONSE TO COMMENTS
PROPOSED INSTITUTIONAL CONTROLS LANGUAGE
DRAFT RECORD OF DECISION, OPERABLE UNIT-1/2A
GROUNDWATER AT SITES 18 AND 24
MCAS EL TORO, CALIFORNIA

May 2002

Originator: Nicole Moutoux, RPM U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 21 March 2002 (via fax)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
COMMENTS ON PROPOSED INSTITUTIONAL CONTROLS LANGUAGE SUBMITTED TO U.S. EPA VIA LETTER ON 15 MARCH 2002	
1. In the cover letter, the Navy states in the first bullet that it is unlikely that an individual homeowner would construct a well for drinking water purposes due in part to high visibility and public mailings regarding the groundwater contamination. I agree, but 5-10 years from now, that might not be the case. I suggest that the Navy commit to periodic mailings regarding the status of the plume (every 2 years?).	**RESPONSE 1:** The DON will include this issue in the on-going discussion of institutional controls that is currently taking place with Irvine Ranch Water District.
2. Section 8.1.2.3, Institutional Controls: The Navy states in the last paragraph that they will provide a map annually to OCHCA and IRWD showing the footprint of the plume. I suggest they include such a map in the ROD for our review and comment.	**RESPONSE 2:** Several figures (e.g., Figures 5-6, 5-7, 5-8) showing the horizontal and vertical extent of the plume are provided in the ROD. These figures are being updated in the draft final ROD to include streets in order to provide a reference for the plume location. The figures/plume maps will be updated annually as part of the remedial action and will be furnished to OCHCA and IRWD as stated in Section 8.1.2.3.
3. Land-Use Restriction Monitoring and Enforcement: The Navy should commit for both the off-base and the on-base plumes to submitting a summary of permits issued by OCHCA and IRWD as well as monitoring reports from their inspections to EPA on an annual basis.	**RESPONSE 3:** Pursuant to discussions with EPA, the DON has revised the institutional controls language in the last paragraph of Section 8.1.2.3 to state the following: "The DON shall provide annually U.S. EPA, DTSC, and the RWQCB with copies of permit applications and permits that it has received from OCHCA and IRWD during the previous year beginning one year from the date of issuance of this ROD and ending when remediation of the plume has been completed."

RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION, OPERABLE UNIT-1/2A
GROUNDWATER AT SITES 18 AND 24
MCAS EL TORO, CALIFORNIA

May 2002

Originator: Nicole Moutoux, RPM U.S. EPA **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 23 April 2002 (via e-mail)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
COMMENTS ON DON'S RESPONSES TO U.S. EPA COMMENTS ON INSTITUTIONAL CONTROLS LANGUAGE **1. Comment Number 1 on the Proposed IC language sent to EPA on 15 March 2002:** **EPA requested that the Navy send out periodic mailings regarding the status of the plume. The Navy's response is that by communicating with OCWD and IRWD, the community will be aware of the status of the plume. EPA believes that the most effective way to maintain the high visibility is some form of periodic mailings. Such mailings could be part of the water bills sent to customers in the relevant areas.**	**RESPONSE 1:** The Navy will include this issue in the on-going discussion of institutional controls that is currently taking place with Irvine Ranch Water District.
2. Revised Section 8.2.2.2 Institutional Controls: **Under Land Use Restrictions on Property Above the Site 24 Shallow Groundwater Plume, the access provisions should be included as a restriction.**	**RESPONSE 2:** The access provisions have been added as a restriction in Section 8.2.2.2 as requested.

Originator: Triss M. Chesney, P.E., RPM DTSC **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 22 April 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
SPECIFIC COMMENTS **The following are comments on the DON's responses to U.S. EPA's comments dated 8 March 2002:**	***RESPONSES TO SPECIFIC COMMENTS***
1. DTSC Comment 14: A clear explanation should be provided in the text regarding how some chemicals of potential concern identified in Table 7-3 were eliminated and as a result not included as chemicals of concern in Table 8-1.	**RESPONSE 1:** An explanation of this issue is found in Section 7.1 and summarized on page 7-8. Chemicals were designated as COCs based on risk assessments performed during the RI. The human health risk assessment conducted during the Phase I RI considered all the COPCs listed in Table 7-3. However, the results showed that the actual chemicals driving the risk in groundwater were limited to inorganics and VOCs. Inorganics were limited from consideration as COCs because a further evaluation indicated that the concentrations of the inorganics were within the range of ambient conditions. This left 1,1,2-TCA, 1,1-DCE, 1,2-DCA, 1,2-dichloropropane, benzene, bromodichloromethane, carbon tetrachloride, chloroform, chloromethane, PCE, and TCE as COCs. Dibromochloromethane was added to the list of COCs on Table 8-1 because it was shown to be an additional risk driver during the Phase II investigation of Site 24. The DON has also reorganized Section 5 to discuss the Phase I investigation at the beginning of the section and explain how chemicals other than VOCs were eliminated as COCs as a result of this investigation.
2. DTSC Comment 20: The response states that exposure of future on-site agricultural [workers] to volatile organic compounds (VOCs) is not plausible because it is unlikely that irrigation wells would be screened in the shallow aquifer due to low yield and higher total dissolved solids (TDS) concentration. Although this scenario may be unlikely, it should be prevented. Additionally, the response states that current and future off-Station agricultural workers could be exposed to VOCs in groundwater. Please include restrictions to prevent exposure of agricultural workers to VOCs in groundwater both on and off of the Station.	**RESPONSE 2:** With regard to the principal aquifer plume, it is not necessary to place restrictions to prevent exposure of agricultural workers to VOCs in the principal aquifer because a risk assessment was performed for this exposure pathway during the Phase I RI. The results showed that risks to a potential agricultural worker from groundwater from the principal aquifer are acceptable. The DON did not evaluate the risks to a potential agricultural worker from exposure to groundwater in the shallow groundwater unit during the Phase II RI because that scenario was not considered plausible. Since the potential risk to the agricultural worker was not quantified during the Phase II RI, the DON

Originator: Triss M. Chesney, P.E., RPM DTSC **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 22 April 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
both on and off of the Station. **In the revised text provided, this includes the following changes:** • **Section 8.2.2.2: The land use control objectives should also include preventing the use of VOC-contaminated groundwater for agricultural purposes until cleanup objectives have been achieved.** • **Page 3 of the Declaration, last paragraph: Institutional controls for the off-Station portion of the groundwater plume are necessary to prevent agricultural use.** • **Sections 10.8.1 and 10.8.2: Add restrictions to protect agricultural workers.**	agrees that exposure of the agricultural worker to groundwater from the shallow groundwater unit should be prevented. To clarify this issue, the second remedial action objective for Site 24 groundwater on page 8-1 has been revised to remove the word "domestic". The RAO now reads "Prevent use of groundwater containing VOCs at concentrations above cleanup levels." The first bullet in Section 8.2.2.2 has been revised to delete the words "for domestic purposes" and now reads as follows: • preventing the use of VOC-contaminated groundwater until cleanup objectives have been achieved. On page 3 of the Declaration in the last paragraph before Statutory Determinations, the first sentence has been revised and a second sentence added as follows: "Institutional controls for the off-Station portion of the groundwater plume are necessary to protect residents from using contaminated groundwater in the principal aquifer and shallow groundwater unit for domestic purposes until cleanup goals are reached. Institutional controls are also necessary to protect agricultural workers from exposure to contaminated groundwater in the shallow groundwater unit." Risks to the agricultural worker from groundwater in the principal aquifer have been evaluated and found to be acceptable. Section 10.8.1 has been revised the same as page 3 of the Declaration. The first sentence of 10.8.2 has been revised to read as follows: "Institutional controls for the on-station portion of the groundwater plume are intended to protect residents and agricultural workers from use of VOC-contaminated groundwater until cleanup goals are achieved in the shallow groundwater unit; protect . . ."
3. Section 8.2.2.3: Please revise text in this section to reflect that future owners and occupants will be subject to the land use restrictions (not just owners).	**RESPONSE 3:** 8.2.2.3 has been changed as requested.

Originator: Triss M. Chesney, P.E., RPM DTSC **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 22 April 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
4. Section 8.2.2.3, Environmental Restriction Covenant and Agreement (Chapters 6.5 and 6.8 of Divison 20 of the California Health and Safety Code [Cal. Health & Safety Code] and California Civil Code [Cal. Civ. Code] 1471: **In the heading, [Cal. Health & Safety Code] should be [Cal. Health and Saf. Code].** **In the sentence beneath this heading, ". . . Cal. Health & Safety Code Division (div) 20 Chapters (chs.) 6.5 and 6.8 . . ." should be revised as ". . . Cal. Health &Saf. Code division 20, chapters 6.5 and 6.8. . ."** **Please revise the last paragraph beneath this heading to reflect that as the covenator, the Department of the Navy (DON) will record the Environmental Restriction Covenant and Agreement(s) (not DTSC) and will provide a copy to DTSC following recordation.**	**RESPONSE 4:** The suggested changes have been addressed as follows: The acronym has been deleted from the heading. The first sentence beneath the heading has been revised as requested. The last paragraph beneath the heading has been revised as requested.
5. Section 8.2.2.3, Environmental Restrictive Covenants in the Quitclaim Deed (California Civil Code Section 1471): Please revise the third paragraph beneath this heading to reflect that DTSC will review the deed to evaluate whether the use restrictions set forth in the Environmental Restriction Covenant and Agreement(s) as well as those in Section 8.2.2.2 of this Record of Decision have been incorporated into the deed language.	**RESPONSE 5:** Section 8.2.2.3 has been revised as requested.
6. Section 8.2.2.3, Land-Use Restriction Monitoring and Reporting: The first sentence states, "The OCHCA and IRWD shall have . . . enforcement action ensure that such permits . . ." Please insert "to" between "action" and "ensure."	**RESPONSE 6:** The word "to" has been inserted as requested.
7. Section 8.2.2.3, Land-Use restriction Monitoring and Reporting: The last paragraph begins, If a violation of such on-Station land-use restriction . . ." Please add that "DTSC may enforce the Environmental Restriction Covenant and Agreement provisions" at	**RESPONSE 7:** The suggested sentence has been added.

Originator: Triss M. Chesney, P.E., RPM DTSC **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 22 April 2002	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
the end of the paragraph.	
8. Section 10.8.2: The fifth paragraph states, "The OCHCA and IRWD shall have . . . enforcement action ensure that such permits . . . " Please insert "to" between "action" and "ensure."	**RESPONSE 8:** The word "to" has been inserted as requested.
9. Section 10.8.2: The last paragraph begins, "If a violation of such on-station land-use restriction . . ." Please add that DTSC may enforce the Environmental Restriction Covenant and Agreement provisions" at the end of the paragraph.	**RESPONSE 9:** The suggested sentence has been added.

May 2002

Originator: Patricia A. Hannon RWQCB **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 30 April 2002 (via e-mail)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
COMMENTS ON DON'S RESPONSES TO RWQCB'S COMMENTS ON DRAFT ROD AND TO PROPOSED INSTITUTIONAL CONTROLS LANGUAGE **The responses to our comments on the Draft ROD for 18 and 24 are satisfactory. We have some additional comments/additions to the revised IC section. These are highlighted below:**	
1. Changes to the institutional controls language in Section 8.2.2.2 follow: ***Land Use Restrictions on Property Above the Site 24 Shallow Groundwater Plume*** **1. No new groundwater extraction, injection, or drinking water wells shall be installed within the Site 24 groundwater plume without prior review and written approval from the DON, ~~and~~ DTSC, and RWQCB. The transferee shall also obtain permits for such wells as required by OCHCA and IRWD as described in Section 8.1.2.3.** **2. Extraction, injection, and monitoring wells, and associated piping and equipment that are included in the remedial action shall not be altered, disturbed, or removed without the prior review and written approval from the DON, ~~and~~ DTSC, and RWQCB.**	**RESPONSE 1:** These changes have been made as suggested.
2. • **The transferee must notify the DON, ~~and~~ DTSC, and RWQCB of any transfer of all or a portion of that property**	**RESPONSE 2:** This change has been made as suggested.

Originator: Patricia A. Hannon RWQCB **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 30 April 2002 (via e-mail)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
by the transferee not later than 30 days after the conveyance.	
3. The DON would provide DTSC, ~~and~~ USEPA, and RWQCB with a copy of the relevant language for the proposed Deed for DTSC's and USEPA's review and comment in connection with DTSC's, ~~and~~ USEPA's, and RWQCB's review of the FOST or FOSET documents, as appropriate. The scope of DTSC's and USEPA's review of the deed would be to evaluate whether the use restrictions set forth in Section 8.2.2.2 of this ROD have been incorporated into the deed language in accordance with DON's commitments in the ROD. The Deed will be recorded in the office of the county recorder for the County of Orange. A copy of the recorded deed will be provided to DTSC and USEPA following recordation.	**RESPONSE 3:** These changes have been made as suggested.
4. The DON shall monitor and inspect the status of compliance with the land use restrictions in the Environmental Restriction Covenant and Agreement(s) and Quitclaim Deed(s) protecting on-station extraction, injection and drinking water wells, monitoring wells, and associated piping and equipment concurrently with inspections of such engineering controls and equipment as provided in the Operations and Maintenance Plan. The DON shall report the results of the inspections to the USEPA, ~~and~~ DTSC, and RWQCB. The Operations and Maintenance Plan shall address the frequency of such reporting and the contents of the reports of the inspections.	**RESPONSE 4:** This change has been made as suggested.
5. If a violation of such on-station land-use restriction is identified and/or documented by either the DON or DTSC, the entity identifying the violation will notify the others within ten (10) working days of identifying the violation. The DON, USEPA, ~~and~~ DTSC, and RWQCB shall then consult to determine what, if any, action(s) should be taken, which of them shall undertake the action(s), and when it/they shall be undertaken. The results of such a consultation shall be memorialized in writing.	**RESPONSE 5:** This change has been made as suggested.
The following two comments (Comments 6 and 7) relate to the proposed institutional controls language in Section 10.8:	**RESPONSE 6:** This change has been made as suggested.

Originator: Patricia A. Hannon RWQCB **To:** Dean Gould, BRAC Environmental Coordinator MCAS El Toro **Date:** 30 April 2002 (via e-mail)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
institutional controls language in Section 10.8: **6. The DON shall monitor and inspect the status of compliance with the land use restrictions in the Environmental Restriction Covenant and Agreement(s) and Quitclaim Deed(s) protecting on-station extraction, injection and drinking water wells, monitoring wells, and associated piping and equipment concurrently with inspections of such engineering controls and equipment as provided in the Operations and Maintenance Plan. The DON shall report the results of the inspections to the USEPA, ~~and~~ DTSC, and RWQCB. The Operations and Maintenance Plan shall address the frequency of such reporting and the contents of the reports of the inspections.**	
7. If a violation of such on-station land-use restriction is identified and/or documented by either the DON or DTSC, the entity identifying the violation will notify the others within ten (10) working days of identifying the violation. The DON, USEPA, ~~and~~ DTSC, and RWQCB shall then consult to determine what, if any, action(s) should be taken, which of them shall undertake the action(s), and when it/they shall be undertaken. The results of such a consultation shall be memorialized in writing.	**RESPONSE 7:** This change has been made as suggested.

RESPONSE TO COMMENTS
DRAFT RECORD OF DECISION, OPERABLE UNIT-1/2A
GROUNDWATER AT SITES 18 AND 24
MCAS EL TORO, CALIFORNIA

May 2002

Originator: Richard Bell, District Manager Planning and Resources IRWD **To:** Content Arnold, Lead RPM MCAS El Toro **Date:** 3 May 2002 (via e-mail)	**CLEAN II Program** **Contract No. N68-711-92-D-4670** **CTO-0164** **File Code: 0232**
COMMENTS ON PROPOSED REVISED INSTITUTIONAL CONTROLS LANGUAGE	
1. Section 8.1.2.3 **Under the heading "Land Use Restriction..." Change to "Well Permitting." It doesn't address any land use issue. We have no land use authority.**	**RESPONSE 1:** The heading in question has been changed from "Land-Use Restriction Monitoring and Reporting" to "Monitoring and Reporting." This avoids the implication that IRWD or OCHCA have authority over anything but water use.
2. Insert at the beginning of the first sentence "Subject to their respective powers and jurisdictions, the OCHCA and IRWD..." and after new water "supply" wells. We don't control monitoring wells or shallow dewatering wells.	**RESPONSE 2:** The first insert has been added as requested. The second insert ("supply") is not necessary because we have already said "Subject to their respective powers and jurisdictions..." Monitoring wells and shallow dewatering wells would not be in IRWD's jurisdiction.
3. Section 8.2.2.3 **Same change as in second paragraph above.**	**RESPONSE 3:** The change has been made as explained in Response 2.

BECHTEL NATIONAL INC.

CLEAN II TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N-68711-92-D-4670 **Document Control No.:** CTO-0164/0297

File Code: 0232

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 02R1
1220 Pacific Highway
San Diego, CA 92132-5190

DATE: May 8, 2002
CTO #: 0164
LOCATION: MCAS El Toro, CA

FROM: Thurman L. Heironimus, Project Manager

DESCRIPTION: Response to Comments on Draft Record of Decision for Operable Unit 1 Site 18 – Regional Volatile Organic Compound Groundwater Plume Operable Unit 2A Site 24 – VOC Source - Dated May 2002

TYPE: ____ Contract Deliverable (Cost) X CTO Deliverable (Technical) ____ Other

VERSION: Draft Final REVISION #: 0

ADMIN RECORD: Yes X No ____ Category ____ Confidential ____
(PM to Identify)

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